### GeoRef Search 10816510

8/17/2006

pluronic and diffuser

Pluronic L81

chemical and bubble and coalescence

bubble and curtain and seismic

bubble and curtain and coalescence

bubble coalescence surfactant

acoustic or seismic wave propagation in bubble curtain

bubble diffuser chemical coating

size reduction of bubble seismic

bubble size coalescence

| Ref<br># | Hits | Search Query   | DBs   | Default<br>Operator | Plurals | Time Stamp       |
|----------|------|--|---|---------------------|---------|------------------|
| S1       | 607  | pluronic and wetting and agent<br>and bubble   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR                  | ON      | 2006/08/17 10:34 |
| S2       | 5    | S1 and diffuser  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR                  | ON      | 2006/05/10 15:03 |
| S3       | 44   | laake.in.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR                  | ON      | 2006/05/10 15:34 |
| S4       | 3085 | bubble and rise and wetting and agent  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR                  | ON      | 2006/05/10 15:35 |
| S5       | 63   | bubble and (rise adj time) and wetting and agent   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR                  | ON      | 2006/05/10 15:41 |
| S6       | 1214 | seismic and (near-surface or<br>("near" adj surface) or<br>weathering) and frequency                 | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR                  | ON      | 2006/05/10 15:37 |
| S7       | 254  | seismic and (near-surface or<br>("near" adj surface) or<br>weathering) and frequency and<br>vibrator | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR                  | ON      | 2006/05/10 15:38 |
| S8       | 80   | (seismic or acoustic) and (bubble with coalescence)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR                  | ON      | 2006/05/10 15:45 |

| S9  | 662 | lee.in. and curtain  | US-PGPUB;   | OR | ON | 2006/05/10 15:46 |
|-----|-----|--|---|----|----|------------------|
|     |     |  | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              |    |    |                  |
| S10 | 4   | lee.in. and curtain and seismic  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/05/10 15:46 |
| S11 | 4   | ("2954090"   "4618024"  <br>"4632213").PN. OR ("6606278").<br>URPN.                            | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2006/05/10 15:54 |
| S12 | 3   | seismic and (bubble adj diffuser)  | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2006/05/10 15:55 |
| S13 | 5   | seismic and (bubble adj diffuser)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/05/10 15:55 |
| S14 | 12  | seismic and (bubble with curtain)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/05/10 15:55 |
| S15 | 5   | seismic and bubble with diffuser   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/05/10 15:55 |
| S16 | 14  | S14 S15  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/05/10 15:55 |
| S17 | 7   | ("4398925"   "5117882"  <br>"5613456"   "5688405"  <br>"5831166").PN. OR ("6123044").<br>URPN. | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2006/05/10 17:03 |

| S18        | 1086 | (bubble with coalescence)                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/10 14:59 |
|------------|------|---|---|----|----|------------------|
| S19        | 8    | (bubble with coalescence) and (rise adj time) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/10 15:00 |
| S20        | 21   | (bubble with coalescence) and pluronic        | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/10 15:03 |
| S21        | 13   | seismic and (bubble with curtain)             | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/10 15:03 |
| <b>S22</b> | 1    | seismic and (bubble-curtain)                  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/10 15:03 |
| S23        | 13   | S21 S22                                       | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/10 15:03 |
| S24        | 8    | "5959938"                                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 10:34 |
| S25        | 3    | "6606278"                                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 10:34 |

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| S26 | 10  | S24 S25   | US-PGPUB;   | OR   | ON | 2006/08/17 10:35 |
|-----|-----|---|---|------|----|------------------|
| 320 | 10  | 327 323   | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              | OK . | Ö  | 2000/08/17 10.55 |
| S27 | 2   | "6332507"   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR   | ON | 2006/08/17 10:35 |
| S28 | 40  | ("2954090"   "3659713"   "3713540"   "3979289"   "4178245"   "4219423"   "4288321"   "4296884"   "4419232"   "4582048"   "4618024"   "4625302"   "4632213"   "4669972"   "4692059"   "4749479"   "4880333"   "4919820"   "5102261"   "5197821"   "5220958"   "5225622"   "5322629"   "5345741"   "5354456"   "5354459"   "5372711"   "5394786"   "5427679"   "5558462"   "5959938"   "692104"   "6346193"   "RE36297").PN. OR ("5959938"   "6567341"   "6606278").URPN. | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR   | ON | 2006/08/17 10:41 |
| S29 | 10  | ("2757356"   "2954090"  <br>"3943484"   "4087780"  <br>"4397006").PN. OR ("4625302").<br>URPN.  | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR   | ON | 2006/08/17 10:50 |
| S30 | 15  | ("2586706"   "2604954"  <br>"2877859"   "2954090"  <br>"3496532"   "3572462"  <br>"3730289").PN. OR ("4618024").<br>URPN.   | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR   | ON | 2006/08/17 10:52 |
| S31 | 21  | S29 S30   | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR   | ON | 2006/08/17 11:14 |
| S32 | 204 | 367/15.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR   | ON | 2006/08/17 11:14 |
| S33 | 82  | 367/17.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR   | ON | 2006/08/17 11:14 |

| S34  | 145 | 367/24.ccls.                     | US-PGPUB;   | OR | ON | 2006/08/17 11:14 |
|------|-----|----------------------------------|---|----|----|------------------|
|      |     |                                  | USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB              |    |    |                  |
| S35  | 157 | 181/110.ccls.                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 11:40 |
| \$36 | 469 | 367/141.ccls.                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 11:40 |
| S37  | 0   | "162".ccls.                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 11:41 |
| S38  | 117 | 181/115.ccls.                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 11:48 |
| S39  | 61  | 7/162.ccls.                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 11:41 |
| S40  | 221 | 367/162.ccls.                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 11:41 |
| S41  | 3   | jones.in. and seismic and bubble | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 11:54 |

| S42 | 282   | 367/154.ccls.                                  | US-PGPUB;<br>USPAT;   | OR | ON | 2006/08/17 11:49 |
|-----|-------|--|---|----|----|------------------|
|     |       |  | USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB                        |    |    |                  |
| S43 | 20    | "367"/\$.ccls. and (bubble with curtain)       | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 11:49 |
| S44 | 9     | (bubble with curtain) and seismic and chemical | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 11:49 |
| S45 | 25    | jones.in. and explosive and bubble             | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 11:54 |
| S46 | 2     | ("2954090").PN. OR ("6571906").<br>URPN.       | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2006/08/17 12:32 |
| S47 | 155   | "5141738"                                      | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2006/08/17 12:33 |
| S48 | 3446  | drake.in.                                      | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2006/08/17 12:33 |
| S49 | 17680 | ross.in.                                       | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2006/08/17 12:33 |
| S50 | 21100 | S48 S49  | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2006/08/17 12:33 |
| S51 | 581   | S50 and bubble                                 | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2006/08/17 12:33 |
| S52 | 4     | S50 and bubble and seismic                     | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2006/08/17 12:33 |
| S53 | 2     | seismic and bubble and pluronic                | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | ON | 2006/08/17 12:33 |

| S54 | 1     | "5141738".pn.   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2006/08/17 12:53 |
|-----|-------|---|--|----|-----|------------------|
| S55 | 11    | (("3084651") or ("3739869") or ("4045084") or ("4183744") or ("4618024") or ("4625302") or ("5401921") or ("5422043") or ("5513149") or ("5645771") or ("5959938")).PN.   | US-PGPUB;<br>USPAT   | OR | OFF | 2006/08/17 12:58 |
| S56 | 0     | S55 and pluronic  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB          | OR | ON  | 2006/08/17 13:00 |
| S57 | 7     | "5863501"   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB          | OR | ON  | 2006/08/17 13:00 |
| S58 |       | seismic and bubble and curtain and surfactant   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB          | OR | ON  | 2006/08/17 13:04 |
| S59 | 17    | (US-4006795-\$ or US-4618024-\$ or US-5359575-\$ or US-5959938-\$ or US-6489707-\$ or US-6123044-\$ or US-5321668-\$ or US-6567341-\$ or US-6606278-\$ or US-6567341-\$ or US-4625302-\$ or US-4921068-\$ or US-5992104-\$ or US-6571906-\$ or US-5422043-\$ or US-5863501-\$).did. or (US-2954090-\$).did. | USPAT;<br>USOCR  | OR | ON  | 2006/08/17 14:39 |
| S60 | 1     | S59 and surfactant  | USPAT;<br>USOCR  | OR | ON  | 2006/08/17 13:25 |
| S61 | 67650 | (bubble withdiffuser) and coating   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2006/08/17 14:40 |

| S62 | 286 | (bubble with diffuser) and coating | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/08/17 14:40 |
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